

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

1. (Once Amended) An array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support, wherein each probe oligonucleotide spot of said pattern ~~corresponds to a target nucleic acid and~~ comprises an oligonucleotide probe composition made up of long oligonucleotide probes that range in length from about 50 to 120 nt nucleotides.

3. (Once Amended) The array according to Claim 2, wherein each probe oligonucleotide spot in said pattern ~~corresponds~~ hybridizes to a different target nucleic acid.

Cancel Claim 4.

Cancel Claim 5.

Cancel Claim 6.

10. (Once Amended) The array according to Claim 1, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about 1000/cm².

11. (Once Amended) The array according to Claim 10, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about 400/cm².

12. (Once Amended) The array according to Claim 1, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 50,000 in number.

13. (Once Amended) The array according to Claim 1, wherein the ~~number~~ of spots on said array ~~ranges~~ range from about 50 to 10,000 in number.

14. (Once Amended) An array comprising a pattern of probe oligonucleotide spots covalently bound to the surface of a solid support, wherein each probe oligonucleotide spot ~~corresponds to a target nucleic acid and~~ comprises a long oligonucleotide probe composition made up of long oligonucleotides of from about 60 to 100 ~~nt~~ nucleotides in length, wherein each of said long oligonucleotide probes exhibits substantially the same high hybridization efficiency with its respective target and low level of non-specific hybridization.

16. (Once Amended) The array according to Claim 15, wherein each probe oligonucleotide spot in said pattern ~~corresponds~~ hybridizes to a different target nucleic acid.

17. (Once Amended) The array according to Claim 15, wherein two or more probe oligonucleotide spots in said pattern ~~correspond~~ hybridize to the same target nucleic acid.

18. (Once Amended) The array according to Claim 14, wherein ~~the length of~~ each of said unique oligonucleotides ranges from about 65 to 90 nucleotides in length.

19. (Once Amended) The array according to Claim 14, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about 1000/cm².

20. (Once Amended) The array according to Claim 14, wherein the ~~density of~~ spots on said array ~~does~~ do not exceed a density of about 400/cm².

21. (Once Amended) The array according to Claim 14, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 50,000 in number.

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22. (Once Amended) The array according to Claim 14, wherein the ~~number~~ of spots on said array ~~ranges~~ range from about 50 to 10,000 in number.

23. (Once Amended) An array comprising a pattern of probe oligonucleotide spots of a density that does not exceed about 400 spots/cm² covalently attached to the surface of a glass support, wherein each probe oligonucleotide spot ~~corresponds to a different target nucleic acid~~ and comprises an oligonucleotide probe composition made up of long oligonucleotides of from about 65 to 90 ~~nt nucleotides~~ in length, ~~wherein each of said long oligonucleotides has substantially the same high hybridization efficiency for its corresponding target and the substantially the same low level of non-specific hybridization.~~

Please add the following new claims:

--36. The array according to Claim 1, wherein any variance in hybridization efficiency among any two probes of said array does not exceed about 10-fold.

37. The array according to Claim 14, wherein any variance in hybridization efficiency among any two probes of said array does not exceed about 10-fold.

38. The array according to Claim 23, wherein any variance in hybridization efficiency among any two probes of said array does not exceed about 10-fold. --

IN THE SPECIFICATION

Please replace the paragraph beginning on page 41, line 1, with the following rewritten paragraph:

TABLE 1

Array Position	Probe Name	Probe Sequence
A1	s64_2	AC CTAGAAAGCT ATTGAGCT GATCGTCC TCTGATCGTG ACCGCCTCC TGAAGAATT CGGACATCTC TGCCAAAGTC TTGTGACCTG TAGCTGCCA (SEQ ID NO:3)
A2	s64_2_90	AGAAAAGCTATTGGAGCTGATCGTCCCTCTGATCGTGACGCCCTCCCTGAGAAATTTCGGACATCTCTGCCAAAGTCTTGTGA (SEQ ID NO:4)
A3	s64_2_80	AGCTTATTGAGCTGGATCGTCCCTCTGATCGTGACGCCCTCCCTGAGAAATTTCGGACATCTCTGCCAAAGTCTTGTGA (SEQ ID NO:5)
A4	s64_2_70	ATTGAGGTGGATCCGTCCTCTGATCGTGACGCCCTCCCTGAGAAATTGGACATCTCTGCCAAAGTA (SEQ ID NO:6)
B1	s64_2_60	AGCTGGATCGTCCCTCTGATCGTGACGCCCTCCCTGAGAAATTGGACATCTCTGCCA (SEQ ID NO:7)
B2	s64_2_50	AATCGTCCCTCTGATCGTGACGCCCTCCCTGAGAAATTGGACATCTA (SEQ ID NO:8)
C1	s26_2	AAACCCAGGA AAATAACAAA TCCAGATTTC TTGAAAGATC TGGAAACCCTT CAGAATGACT CCTTTAGTG CTATTGGTT GGAGCTGTG TCCATGACCTA (SEQ ID NO:9)
C2	s26_2_90	AGGGAAAAATCCAGAAATTCTTGAGATCTGGAAACCTTCAAGATGACTCCCTTCTGAGATCTGGAAACCTTCAAGATGACTCCCTTCTGAGCTGTGCTCCATA (SEQ ID NO:10)
C3	s26_2_80	AATACCAAATCTCAGATTCTTGAGATCTGGAAACCTTCAAGATGACTCCCTTCAAGATGACTCCCTTCTGAGCTGTGCTCCATA (SEQ ID NO:11)
C4	s26_2_70	AAAATCCAGATTCTTGAGATCTGGAAACCTTCAAGATGACTCCCTTCAAGATGACTCCCTTCTGAGCTGTGCTCCATA (SEQ ID NO:12)
D1	s26_2_60	ACAGATTCTTGAGATCTGGAAACCTTCAAGATGACTCCCTTCAAGATGACTCCCTTCTGAGCTGTGCTCCATA (SEQ ID NO:13)
D2	s26_2_50	ATTCTTGAGATCTGGAAACCTTCAAGATGACTCCCTTCTGAGCTGTGCTCCATA (SEQ ID NO:14)
A5 and E5	c370_2	AGGGTC AGCTGATCTA CGAGTCTGCC ATCACCTGTG AGTACCTGGA TGAAGGATAC CCAGGGAAA AGCTGTTGCC GGATGACCCC TATGAGAAAG CTTGCA (SEQ ID NO:15)
A6 and E6	c370_2_90	AAGCTGATCTACAGAGTCGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAAAGCTGTTGCCGATGACCCCTATGAGAAA (SEQ ID NO:16)
A7 and E7	c370_2_80	AATCTACAGAGTCGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAAAGCTGTTGCCGATGACCCCTATA (SEQ ID NO:17)
A8 and E8	c370_2_70	ACGASTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAAAGCTGTTGCCGATGACCA (SEQ ID NO:18)
B5 and F5	c370_2_60	ACTCCATACACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAAAGCTGTTGCCGGA (SEQ ID NO:19)
B6 and F6	c370_2_50	AATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAAAGCTGTTGTA (SEQ ID NO:20)

G1	s91_3	AGGCCCAAAAT GGCTGAAAT CTCGCCATT TAGGCATTCT ACTCAGAAAA ACCCTAAAAA TTICACAAATG TGTCAAGAAGA GCCTTGATGT GGAAACCAGATA (SEQ ID NO:21)
G2	s91_3_90	ACAAATGGCTGAAATCTCGCCATTAGGCATTCTACTAGAAAAACCTTTAACCAATTCAACAAATGTCAGAAGAGCCCTGATGGAA (SEQ ID NO:22)
G3	s91_3_80	AGCTGAAATCTCGCCATTAGGCATTCTACTAGAAAAACCTTTAACCAATTCAACAAATGTCAGAAGAGCCCTGATA (SEQ ID NO:23)
G4	s91_3_70	AGAAATCTCGCCATTAGGCATTCTACTAGAAAAACCTTTAACCAATTCAACAAATGTCAGAAGAGCCA (SEQ ID NO:24)

Please replace the paragraph beginning on page 42, line 1, with the following rewritten paragraph:

H1	s91_3_60	ACTCGCCTATTAGGCATTCTACTAGAAAAACCTTTAACCAATTCAACAAATGTCAGAAA (SEQ ID NO:25)
	s91_3_50	ACTATTAGGCATTCTACTAGAAAAACCTTTAACCAATTCAACAAATGTCGA (SEQ ID NO:26)
E1	s97_4	ATAGGAGGGG TGAAGGCCAG CTGCTCATGA ACGAGTTGA GTCAAGGCAAG GGTCAGCTTG AGAAAATGCTT GGAAGTAAAC CCCAGAAATA AGGCTGCAAGA (SEQ ID NO:27)
E2	s97_4_90	AGGGGTGAAGGCCAGCTGCTCATGAACAGGTTGACTCACCCAAAGGGTCACTTGAAGAAAGTGCCTGGAAAGTAAACCCCCAGAAATA TAGGCA (SEQ ID NO:28)
E3	s97_4_80	AGAAGGCCAGCTGCTCATGAACAGGTTGACTCACCCAAAGGGTCACTTGAAGAAAGTGCCTGGAAAGTAAACCCCCAGAAATA (SEQ ID NO:29)
E4	s97_4_70	ACCAGCTGCTCATGAACCAAGGGTCACTTGAAGAAAGTGCCTGGAAAGTAAACCCCCCA (SEQ ID NO:30)
F1	s97_4_60	ATGCTCATGAACCAAGGGTCACTTGAAGAAAGTGCCTGGAAAGTAAACCCCCCA (SEQ ID NO:31)
F2	s97_4_50	AATGAACCGAGTTGAGTCAAGCCAAAGGGTCACTTGAAGAAAGTGCCTGGAAA (SEQ ID NO:32)
C5	s74_3	ATATGTAACTGAAGAA GGTGACAGTC CTTGGGTGA CCATGTTGAGTGGGT TCTCTGTCAG AGAAAATTAGC AGCAGTCGTC AATAACCTAA ATACTGGCA AGTGTAA (SEQ ID NO:33)
C6	s74_3_90	AAACTGAAGGAAGGTGACAGTCCTTGGGTGACCATGTTGGTTCTGTCAAGAAAATTAGCAGCTAAACCTAAATACTGGGA (SEQ ID NO:34)
C7	s74_3_80	AAAGAAGGGTGACAGTCCTTGGGTGACCATGTTGGTTCTGTCAAGAAAATTAGCAGCTAAACCTAAATAA (SEQ ID NO:35)
C8	s74_3_70	AAGTGACAGTCCTTGGGTGACCATGTTGGTTCTGTCAAGAAAATTAGCAGCTAAACCTAA (SEQ ID NO:36)
D5	s74_3_60	ACAGTCCTTGGGTGACCATGTTGGTTCTGTCAAGAAAATTAGCAGCTAA (SEQ ID NO:37)
D6	s74_3_50	ACTTGGGTGACCATGTTGGTTCTGTCAAGAAAATTAGCAGCTAA (SEQ ID NO:38)

TABLE 1 (CONT)